II.4 COMMENTS AND RESPONSES: AGENCIES (STATE)

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The master responses provided in Section II.2*, Master Responses, MR-1 through MR-8*, address similar comments received from multiple commenters on the Draft Supplemental EIR and, therefore, many individual responses to comments refer back to the master responses. These Master Responses are:

- MR-1, Scope of the Commission's Discretionary Action
- MR-2, Lease Modification Project Scope
- MR-3, Responsible Vs. Lead Agency & Supplemental Vs. Subsequent EIR
- MR-4, Piecemealing
- MR-5, Diffuser Entrainment Mortality and Species Affected
- MR-6, Marine Protected Areas
- MR-7, Cumulative Impacts
- MR-8, Alternatives

II.4.6 **Comment Set A6: California Coastal Commission**

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

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July 27, 2017

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VIA EMAIL: CEQA.comments@slc.ca.gov

RE: Comments on Draft Supplemental Environmental Impact Report ("DSEIR") for the proposed Poseidon desalination project ("Poseidon Project") in Huntington Beach (SCH #2001051092)

Dear Ms. Borack:

This letter provides Coastal Commission staff comments on the above-referenced DSEIR. The DSEIR limits its review to just the proposed changes to the project's offshore components that occurred after the previous CEQA review was completed in 2010 by the City of Huntington Beach and that are within the California State Lands Commission's ("CSLC's") tidelands lease. The DSEIR refers to these proposed changes, which include installation of wedgewire screens and a diffuser, as the Lease Modification Project ("LMP"). In response to the CSLC's Notice of Preparation of a Supplemental Environmental Impact Report, Coastal Commission staff had requested that in addition to evaluating these newly proposed offshore LMP components, the CEQA analysis be broadened and modified to address onshore project changes, changed circumstances, and new information applicable to the Poseidon Project that have occurred or been developed since the EIR was certified by the City of Huntington Beach in 2010. A6-1

Coastal Commission staff's request was based on the Coastal Commission's obligation to comprehensively review both onshore and offshore components of the Poseidon Project. The CSLC's review of solely the LMP means that this document will be of limited use for the Coastal Commission to rely on for evaluating conformity of the Poseidon Project to relevant provisions of the Coastal Act and the City of Huntington Beach Local Coastal Program. The Coastal Commission's evaluation of the Poseidon Project will need to address proposed project changes and changed circumstances that have occurred since 2010, the majority of which are not addressed in the DSEIR. For example, the Poseidon Project's projected operating life was originally 30 years, but Poseidon now proposes a 50-60 year operating life, which will extend the period of project effects on marine life and other coastal resources. The proposed site layout has also been modified and wetlands have been identified on site. These are issues that are not evaluated in the DSEIR, given its limited scope, but they will need to be considered by the Coastal Commission.

COMMENT SET A6: CALIFORNIA COASTAL COMMISSION (cont.)

Comments on Poseidon Draft SEIR (SCH #2001051092)

In addition, there is new information available today that was not available during the 2010 CEQA review. For example, there is new information and sources about projected sea level rise ("SLR") and new guidance on how to address SLR.[1] Since 2010, new information has been developed regarding increased seismic risks at and near the site, increased beach scour and erosion rates, and increased tsunami risks. The Coastal Commission will also need an evaluation of the project's effects on nearby Marine Protected Areas ("MPAs"), which were established after completion of the 2010 EIR.

A6-1 cont.

Specific Comments on the DSEIR (LMP Only)

A6-2

Section 3.0 – Cumulative Projects: The document's Table 3-1 briefly describes several nearby projects that could result in cumulative impacts along with the LMP. The table notes only that "Beach Nourishment Projects" occur on an approximately five-year cycle and that one or two such projects are expected within the term of the LMP over the next 10 years. We recommend that the DSEIR be revised to fully evaluate how the necessary beach nourishment will affect the LMP over its expected operating life and how the LMP will rely on beach nourishment in the face of increasing coastal erosion.

In reviewing the 2010 Project's effects related to beach scour and replenishment, the 2010 CEQA document noted only that project stability would rely "on ongoing and increased beach replenishment." It did not assess the amount or timing of beach replenishment needed to protect the facility. Since 2010, new information has been developed establishing that beach scour and erosion is likely to be more severe than previously known and that both the LMP and the Poseidon Project would need even greater volumes of sand to provide adequate protection, particularly over their full proposed operating lives. Over the past several years, the United States Geological Survey has applied the CoSMoS modeling system to identify locations along the California coast where sea level rise and future storm events are likely to cause coastal flooding and erosion. In 2015, the CoSMos process identified the likelihood of significant increases of up to 30% in storm and wave energy at beach locations adjacent to Poseidon's proposed site and increased frequency of extreme El Nino events.[2] As part of the 2015 Independent Science and Technical Advisory Panel ("ISTAP") conducted by Poseidon and

[1] These include: 2013 California Ocean Protection Council *State of California Sea-Level Rise Guidance Document* ("*State Guidance Document*"), which was based largely on a 2012 National Research Council report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future,* 2014 California Natural Resources Agency *Safeguarding California: Reducing Climate Risk*, 2015 Coastal Commission *Sea Level Rise Policy Guidance,* 2016 California's *Safeguarding California: Implementation Action Plans*, 2017 State Water Board Resolution No. 2007-0059 directing staff to evaluate how to reduce vulnerability of water infrastructure to flooding, storm surge, and sea level rise, Coastal Storm Modeling System ("CoSMoS") 3.0 for Southern California, with expected SLR effects on Southern California beaches, expected 30% increases in wave and storm energies, etc. Several of these documents and efforts resulted in part from work of California's Coastal and Ocean Resources Working Group for the Climate Action Team, an interagency state effort that includes about twenty agencies, including the CSLC, State Water Board, and Coastal Commission.

[2] See, for example, Cai et. al, *ENSO and greenhouse warming*, Nature Climate Change 5, 849-859, 2015, and Barnard et. al, *Coastal vulnerability across the Pacific dominated by El Nino/Southern Oscillation*, Nature Geoscience 8, 801-807, 2015.

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Coastal Commission staff, Poseidon provided documentation showing that the beach and surf zone near the proposed facility site could move up to about 1000 feet laterally due to erosion and accretion that results from seasonal sand movement and storm events, and that scour could remove up to about 30 vertical feet of sand from the nearshore area.[3] This amount of sand movement could expose portions of the LMP's offshore pipelines and associated pipeline manholes, some of which are elevated above the pipelines themselves. Poseidon's calculations were prepared prior to release of the above-referenced CoSMos results, so the effects identified during the ISTAP are likely to be even greater than stated.

A6-2 cont.

Increased storm and wave energy and higher rates of coastal erosion within state tidelands could result in exposure and possible damage to the intake and outfall structures, which in turn could affect public access, marine life, and other coastal resources. We recommend that the SEIR be revised to incorporate new information about expected increases in sea level rise and coastal erosion rates developed after 2010, including the potential that more frequent and higher volume beach replenishment projects may be needed to protect the LMP.

Section 4.0 – Environmental Setting and Impacts Analysis:

A6-3

- **Geology and Soils:** The DSEIR acknowledges that the prior CEQA review found the 2010 Project may be subject to significant impacts or hazards from seismicity, faulting, unstable soils, liquefaction, and shallow groundwater conditions, though it also notes that these would be reduced through mitigation measures. However, the 2010 CEQA review of seismic-related effects evaluated just the project's onshore components and was based on a lower level of potential seismic activity than is currently expected for the project location. The 2010 review based its assessment on the underlying Newport-Inglewood Fault Zone ("NIFZ") experiencing a maximum 6.9 magnitude earthquake and a maximum ground acceleration of 0.74g. More recent studies have identified the NIFZ as having the potential for earthquakes of 7.4 or 7.5 magnitude earthquakes, which would presumably be accompanied by significantly higher potential ground accelerations.[4]

  The DSEIR further notes that CEQA generally requires that the impacts of existing hazards need to be evaluated only if a proposed project risks exacerbating existing hazards or conditions, such as exposing people or structures to loss, injury, or death, or being located on an unstable site. New information and changed circumstances since the 2010 CEQA review show that the LMP could result in these hazards or conditions. The area's relatively high seismic energy and potential ground movement could result in damage or collapse of the offshore structures, leading to adverse impacts to marine life, public access to the shoreline, recreational use, and/or to other coastal resources. We recommend the SEIR be revised to evaluate whether the LMP would cause adverse effects as a result of the relatively high potential for significant seismic events at and near the site.

[3] See Jenkins, Scott, and Joseph Wasyl, *Oceanographic and Sediment Transport Analysis of Optimal Siting of a Seabed Infiltration Gallery (SIG) at the Huntington Beach Desalination Facility*, May 19, 2014, and Jenkins, Scott, *Updated Beach Gallery Reconsideration Memo*, produced for Poseidon, February 6, 2015.

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Comments on Poseidon Draft SEIR (SCH #2001051092)

The DSEIR includes a currently proposed mitigation measure (APM/APLC-1) that would have Poseidon contract with a structural or civil engineer to investigate the ability of the outfall pipeline to support the selected diffuser based on expected wave loading and currents and increased salinity. We recommend that this mitigation measure be revised to require that this investigation also evaluate the structural integrity of both pipelines and their ability to withstand the site's seismic characteristics.

A6-3 cont.

- **Public Services, Utilities and Service Systems, and Product Water Quality:** The proposed LMP would be subject to adverse effects of sea level rise and climate change, including those associated with increased wave and tide heights, increased storm and wave energy, higher rates of coastal erosion, increased frequency of flooding, and others. As indicated above, protecting the LMP from these phenomena will likely require changes to regional beach nourishment programs. We recommend the SEIR evaluate likely changes needed to this public service, along with the environmental effects of any infrastructure changes that would likely be necessary to protect the LMP and its associated components, and that the review incorporate new state and agency guidance on sea level rise, climate change, and infrastructure adaptability.

A6-4

Section 4.1 Ocean Water Quality and Marine Biological Resources: Both the Poseidon Project and the LMP are expected to have extensive, long-term, and significant adverse effects on public trust marine biological resources due to the type and extent of the entrainment that would result from its use of a screened, open intake. As part of the formal consultation the Regional Board is conducting in its review of the Poseidon Project, we have prepared two technical memoranda that review and critique the Poseidon entrainment data and studies referenced in the DSEIR and that show substantially different and higher annual entrainment impacts than identified in the DSEIR. These productivity losses would also apply to the shorter-term LMP operating life being reviewed in this SEIR. Those memoranda also show that extending the existing intake to any of several different nearby locations would result in substantially lower entrainment rates than the currently proposed intake location. We recommend that the SEIR include a more comprehensive analysis of the potential entrainment effects of the LMP, based on the information available now that was not analyzed as part of the 2010 CEQA review.

A6-5

We also recommend the DSEIR be revised to evaluate the LMP's ocean acidification effects. Global climate change is resulting in increasing acidification of California's offshore waters.[5] California has taken a number of steps to address this adverse impact to the state's coastal waters.[6] Desalination discharges are generally more acidic than ambient ocean water, and in

A6-6

[5] See, for example, Chan, et. al, *Persistent spatial structuring of coastal ocean acidification in the California Current System*, Scientific Reports 7, May 31, 2017, available at: http://www.nature.com/articles/s41598-017-02777-y

[6] See, for example, the state's involvement in the Pacific Coast Collaborative and West Coast Governors Alliance on Ocean Health, the West Coast Ocean Acidification and Hypoxia Science Panel, and the CSLC's 2016-2020 Strategic Plan that includes a specific provision to "Through lease terms and other mechanisms, develop strategies to address and, where possible avoid, shoreline armoring, ocean acidification, and generation of marine debris."

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fact, discharges from Poseidon's Carlsbad facility, which are expected to be similar to those of this Huntington Beach facility, generally has lower pH levels than ambient conditions. The LMP's ongoing discharge of 56 MGD of effluent more acidic than seawater is likely to adversely affect nearby public trust resources and may represent a cumulatively significant adverse impact. We recommend these adverse effects be evaluated in a revised SEIR. A6-6 cont.

Section 4.1.1.2 – Marine Biological Resources: This section describes several of the marine species found in the project area and that rely on local habitat, including the federally-listed endangered western snowy plover (*Charadrius alexandrinus nivosus*). The DSEIR, however, does not evaluate known or expected impacts to the plover. Similarly, the 2010 CEQA review acknowledged the presence of plovers nearby but did not assess potential project impacts to the plover.[7] After 2010, however, the U.S. Fish and Wildlife Service published its final rule regarding designated critical habitat for the plover, which included nearby areas in Bolsa Chica and at the mouth of the Santa Ana River. There has been no CEQA evaluation of the effects of this change related to the Poseidon Project or the LMP, and we recommend the SEIR be revised to include the necessary evaluation. A6-7

Section 4.1.1.3 – Marine Protected Areas: The 2010 CEQA review was completed before MPAs were designated within the Southern California Bight. Several of these MPAs are within source water bodies that would experience entrainment-related effects due to Poseidon's proposed use of the power plant intake. Although Poseidon has stated that the organisms originating in nearby MPAs represent a very small percentage of all the organisms it expects to entrain,[8] it is not yet clear whether those organisms represent a much larger proportion of those originating in a particular MPA – that is, an MPA may provide a relatively small number of the roughly 100 million organisms Poseidon would entrain each year, but those entrained organisms may represent a relatively large proportion of the organisms exported from the MPA to support California's marine life ecosystems. We recommend the SEIR be revised to more fully evaluate how the LMP would adversely affect the intended productivity and connectivity of the affected MPA system. A6-8

Section 4.1.3 – Marine Biological Resources, Significance Criteria: For evaluating the LMP's effects on marine biological resources, the document proposes to use similar significance criteria that were used in the 2010 CEQA review. For entrainment and impingement, the 2010 CEQA document used as its criterion "whether project-related impingement and entrainment impacts would substantially reduce populations of affected species such that the sustainability of those populations could not be maintained." Using this criterion in the SEIR, however, does not acknowledge changes that have occurred since the 2010 CEQA document was certified, A6-9

[7] Additionally, the California Energy Commission's review of the power plant retooling (Application For Certification 00-AFC-13) included a September 8, 2006 letter from the California Department of Parks and Recreation that described the propose power plant's entrainment as one of several effects it considered significant under CEQA guidelines, due to degradation of the plover's foraging habitat and reduction of native fish. However, this issue was not addressed in that AFC review.

[8] See Tenera Environmental, *Assessment of Entrainment Effects Due to the Proposed Huntington Beach Desalination Plant on State Marine Protected Areas*, prepared for Poseidon, 2016.

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including the OPA Desal Amendment. The 2010 document explained part of its reasoning for using that criterion was that while "the primary issue of concern for the project relates to effects from impingement and entrainment… [t]here is no specific regulatory guidance for determining the significance of these impacts for seawater desalination facilities." This is no longer the case, given the specific requirements established in the OPA's Desal Amendment regarding avoiding and minimizing entrainment, so we recommend the SEIR be revised to base its significance criteria on whether the proposed project would exceed that regulatory standard. This change would also be consistent with the other significance criterion the DSEIR adopted from the prior 2010 CEQA review – i.e., whether the project discharge "would exceed regulatory (NPDES permit) limits." We therefore recommend that the SEIR use as a significance criterion whether the LMP would be consistent with requirements of the OPA's Desal Amendment.

A6-9 cont.

The DSEIR also cites the CEQA Guidelines (Section 15065(a)(1)) that an EIR be prepared when a project "has the potential to substantially reduce the habitat of a fish or wildlife species…" As acknowledged in the environmental documentation supporting the OPA's adoption, seawater is habitat.[9] Poseidon's proposed intake volume of 106 MGD of seawater habitat represents a significant reduction of the habitat numerous species rely on to support their productivity. During each year of operations, the LMP would remove more than 38 billion gallons of habitat.[10] Although the water drawn into the intake comes from source water bodies that extend some distance up and down coast, this volume, if condensed into a single location, is the equivalent of losing, each year, all of the water along the entire 9.5 mile City of Huntington Beach shoreline and extending a mile offshore.[11] A land-based habitat effect of this magnitude would certainly be considered significant, and we recommend the SEIR also evaluate this proposed effect on seawater habitat as significant.

Section 4.1.4 – Marine Biological Resources, Environmental Impact Analysis and Mitigation: The DSEIR describes several conclusions reached in the 2010 CEQA review regarding the 2010 Project's less than significant impacts on nearby marine biological resources and benthic habitat and similarly evaluates the proposed LMP's impacts on those nearby resources. As noted above, we disagree with these conclusions with respect to entrainment-related impacts and recommend the SEIR reassess project-related effects within the expected source water areas.

A6-10

Section 4.1.4.1 – Marine Biological Resources, Construction Impacts: The DSEIR addresses construction-related impacts primarily as they relate to the LMP's offshore activities, including

A6-11

[9] See *Final Substitute Environmental Documentation for Amendment to the Water Quality Control Plan for Ocean Waters of California*, Adopted May 6, 2015.

[10] The project would also discharge about half this volume as effluent that must be diluted before it can again serve as habitat.

[11] 106 MGD equals approximately 118,680 acre-feet per year. Assuming an average depth of 20 feet within the first mile offshore of Huntington Beach, this volume of water would be equal to that "wedge" of water extending along the 9.5 mile Huntington Beach shoreline.

COMMENT SET A6: CALIFORNIA COASTAL COMMISSION (cont.)

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dredging up to about 3,300 cubic yards of sediment that would be transported by barge for upland disposal and placing about 1,300 square feet of riprap during intake screen installation

and about 4,000 square feet of riprap as part of the diffuser installation. These dredge and fill activities would be subject to Coastal Act Section 30233, which requires that such activities in coastal waters occur only when there is no less feasible alternative (including reducing the extent of dredged or filled areas) and that suitable dredged material be used for beach replenishment. We recommend the analysis evaluate whether the extent and volume of proposed dredging and fill can be reduced and whether the dredged material can be used for beach replenishment.

A6-11 cont.

Section 4.6 – Greenhouse Gas Emissions: The DSEIR evaluates offshore construction-related emissions of the LMP. Because the currently proposed project would involve additional construction-related emissions beyond those evaluated in the 2010 CEQA review, we recommend the upcoming review evaluate the increased emissions resulting from those activities. This issue area is of particular concern, given that the 2010 CEQA review identified the expected construction-related emissions as an "unavoidable significant impact," even after incorporating mitigation measures.

A6-12

Section 4.7 – Hazards and Hazardous Materials: The DSEIR briefly acknowledges the potential for tsunamis at and near the LMP site, though similar to its statement regarding seismic risks, it notes that CEQA generally requires that the impacts of existing hazards need to be evaluated only if a proposed project risks exacerbating existing hazards or conditions, such as exposing people or structures to loss, injury, or death, or being located on an unstable site. With new information about tsunamis developed after the previous 2010 CEQA review, we recommend the SEIR evaluate the potential adverse effects of a tsunami on the LMP.

The 2010 CEQA review of tsunami-related hazards was based on the City's 1996 General Plan Environmental Hazards Element, which acknowledged the project's location within the City's Tsunami Runup Zone and stated that it was subject to low risk of tsunami runup elevations of no more than five feet (100-year recurrence) or 7.5 feet (500-year recurrence). The City's review did not incorporate the 2009 California Geological Survey's Tsunami Runup Map for Huntington Beach, which projected runups of up to 11 feet above mean sea level. An even more recent study suggests even greater inundation levels at the site of up to about 20 feet.[12] [***Note:*** these runup elevations do not include the above-referenced recent SLR projections and would therefore be even higher than stated above.] There has been no evaluation of tsunami effects, at the earlier projections or at the current projections, on the LMP's offshore components. It is likely that the higher energy that would accompany a larger tsunami would create one or more "drops" in offshore elevations that could damage the LMP. We recommend the SEIR include these evaluations.

A6-13

12 See *Science Application for Risk Reduction (SAFRR) Tsunami Scenario*, published in September 2013 by California's Natural Resources Agency, Department of Conservation, and Geological Survey and the United States Geological Survey and Department of Interior, which describes a tsunami scenario for the California coast that would result from a 9.1 earthquake in the Aleutians. While the study did not identify specific run up elevations along the Huntington Beach shoreline, it noted that tsunami elevations in adjacent Newport Beach could reach up to about 20 feet above mean sea level with velocities of up to about 60 feet per second (or roughly 45 miles per hour).

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COMMENT SET A6: CALIFORNIA COASTAL COMMISSION (cont.)

Comments on Poseidon Draft SEIR (SCH #2001051092)

The Hazards section of the DSEIR also cites concerns identified during the previous CEQA review regarding the power plant outfall's structural stability when subjected to back pressure resulting from Poseidon's proposed diffuser. The DSEIR states that several evaluations will likely be conducted in the future in order to determine the outfall's structural stability. We recommend, if the evaluations show the outfall does have the necessary structural integrity, that the review assess alternatives to using the existing structure, including the potential of "sliplining" the existing outfall to allow it to convey Poseidon's discharge and potentially avoid some construction-related impacts that would result if alternative structural improvements are required (see also our related comments on the intake and outfall's possible seismic instability). A6-14

Section 5.0 – Alternatives, and Section 6.0 – Other Required CEQA Sections and Environmentally Superior Alternative: The DSEIR describes several potentially feasible and less environmentally damaging alternatives that were considered but eliminated from review. Two of those alternatives would have involved extending the existing intake from about two to four kilometers further offshore to nearby locations that would result in lower project entrainment rates. The DSEIR acknowledges that extending the existing intake "would meet most project objectives and is potentially technically feasible." However, the DSEIR's Section 5.3.1.2, in providing the rationale for eliminating these two alternatives, states that Poseidon found that larval densities would either be significantly higher or would not be significantly different than those at the existing intake location, and that the additional construction-related effects of extending the intake would not be offset by meaningful reductions in entrainment effects. As noted above, we have prepared two technical memoranda that raise substantial questions about the study Poseidon conducted to reach its proposed conclusions. These memoranda also suggest that extending the intake to any of several nearby feasible locations would likely result in the Poseidon Project having a substantially lower entrainment rate than it would at the existing intake location. We recommend that the SEIR consider potential alternative intake locations, taking into consideration updated analyses of potential entrainment effects. A6-15

Additionally, although Poseidon has separately contended that the deeper offshore sites may not have sufficient "sweeping velocities" to keep the wedgewire screens clean, this potential shortcoming of those sites could be overcome with use of the self-cleaning screens described in the DSEIR's Section 6.0 and concluded to be the Environmentally Superior Alternative. Even if these self-cleaning screens initially require additional boat trips for inspection and therefore increase project-related emissions, this is a relatively minor impact compared to the substantial reduction in marine life mortality that would result from locating the intake at these deeper locations. We understand that this type of screen has been designed to meet fairly stringent criteria for fish protection and has been used in tidal environments.[13] We recommend the revised document continue to support this self-cleaning screen system as a feasible and environmentally superior alternative to the current proposed screens.

[13] The company referenced on the DSEIR's page 5-13, Intake Screen, Inc., provides descriptions of a number of environmental settings where these screens have been installed and provides design criteria requirements from a number of agencies – U.S. Environmental Protection Agency, National Marine Fisheries Service, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, etc. – that the screens are intended to meet.

COMMENT SET A6: CALIFORNIA COASTAL COMMISSION (cont.)

Again, thank you for the opportunity to comment. If you have questions, please call me at 415-904-5205 or Tom Luster at 415-904-5248.

Sincerely,

ALISON DETTMER
Deputy Director

Cc: State Water Resources Control Board – Claire Waggoner
Santa Ana Regional Water Quality Control Board – Milasol Gaslan
Poseidon Water – Scott Maloni
Orange County Water District – John Kennedy

RESPONSE TO COMMENT SET A6: CALIFORNIA COASTAL COMMISSION

A6-1 The CCC states that in the comments it submitted on the California State Lands Commission (Commission or CSLC) Notice of Preparation that it had requested the CEQA analysis "be broadened and modified to address onshore project changes, changed circumstances, and new information applicable to the Poseidon Project that have occurred or been developed since the EIR was certified by the City of Huntington Beach in 2010." This Commission could not accept this request for the reasons provided in Supplemental EIR Section 1.4, *Purpose and Scope of Supplemental EIR*, that: (1) the proper scope for the Lease Modification Project is that provided in Poseidon's lease amendment application and described in Supplemental EIR Section 2, *Project Description;* (2) preparation of a Supplemental EIR is appropriate for evaluation of the potential significant impacts associated with the Lease Modification Project; and (3) a new complete review of the 50 MGD HB Desalination Plant Project approved in 2010 does not consider the extensive environmental review that has already occurred, the Applicant's vested rights, the characteristics of the proposed modifications, and other considerations. See also master responses MR-1*, Scope of the Commission's Discretionary Action*, MR-2, *Lease Modification Project Scope*, MR-3, *Responsible vs. Lead Agency & Supplemental vs. Subsequent EIR*, and MR-4, *Piecemealing*).

A6-2 As stated in master responses MR-1*, Scope of the Commission's Discretionary Action*, and MR-2, *Lease Modification Project Scope,* the scope of the project before the Commission is the proposed Lease Modification Project, which includes subsea components (wedgewire screens and a multiport diffuser) that would be located at the ends of the Huntington Beach Generating Station (HBGS) intake and discharge pipelines more than 1,500 feet from shore at depths of approximately 33 feet mean lower low water (MLLW). The Commission authorized the use of these pipelines for desalination in 2010 (potential sea-level rise impacts to the HB Desalination Plant itself were analyzed in detail in the 2010 FSEIR in Chapter 4.12), so only the proposed Lease Modification Project modifications are within the scope of the Supplemental EIR's analysis and Commission's discretionary action. Given the projected estimates of sea-level rise presented in Supplemental EIR Section 8.1, *Climate Change and Sea-Level Rise Considerations*,[1] these components would likely become more submerged and located further from the shoreline over the life of the Lease Modification Project. The offshore locations of the screens and diffuser also means that they are not dependent on beach nourishment in the face of increasing coastal erosion, as may be the onshore Huntington Beach Desalination Plant. For these reasons, the Supplemental EIR has not been revised. See also master response MR-3, *Responsible vs. Lead Agency & Supplemental vs. Subsequent EIR*, Subpart D.3, *Sea-Level Rise*.

The potential cumulative effects of periodic beach nourishment efforts are related primarily to construction impacts to air quality, GHG emissions, and marine vessel transportation if barges and other vessels are required to nourish the beach in the general Lease Modification Project area.

A6-3 As noted in Section 1.3.1, *Project Context with Respect to CEQA*, this Supplemental EIR has been prepared in accordance with the California Supreme Court's decision in December 2015 in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369, 386. In that case, the Court held that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." With limited exceptions, the Court concluded that the impacts of existing environmental hazards only need to be analyzed if a proposed project risks exacerbating those hazards or conditions. Therefore, this Supplemental EIR does not identify

[1] As stated in Section 8.1, compared to year 2000 levels, the southern California region could see up to 1 foot of sea-level rise by the year 2030, 2 feet by 2050, and possibly over 5 feet by 2100 (National Research Council 2012).

earthquakes, tsunamis, or other existing hazards as impacts of the Lease Modification Project.

The introduction to Supplemental EIR Section 4, *Environmental Setting and Impact Analysis*, in the subsection entitled No Impacts/Not Significant Impacts, presents the reasons that the disciplines of geology, soils, and seismicity were found to have no impact from the proposed Lease Modification Project. The new data referenced in this comment describing recent studies of potential seismicity in the Project area do not change the conclusions of this section. Even considering the new studies, the CLSC finds that the Lease Modification Project does not have the potential to result in impacts to people, structures, or the environment, as set forth by CEQA. For these reasons, the Supplemental EIR has not been revised.

A6-4 See Response to Comment A6-2.

A6-5 As stated in master responses MR-1, *Scope of the Commission's Discretionary Action*, and MR-2, *Lease Modification Project Scope*, in 2010, the Commission granted Poseidon a vested right to use the subsea HBGS pipelines for seawater intake and brine and other effluent discharges, through August 7, 2026. One modification Poseidon proposed in its lease amendment application to the Commission would reduce seawater intake volume to 106.7 MGD (approximately 30 percent less source water than the 152 MGD volume approved by the City of Huntington Beach and Commission in 2010). Master response MR-5 *Diffuser Entrainment Mortality and Species Affected*, addresses entrainment associated with the diffuser.

The alternative of extending the intake location further offshore is addressed in Supplemental EIR Section 5.3.1., *Intake Pipeline Extension Alternative* (see also master response MR-8, *Alternatives* regarding consideration of alternatives that extend beyond the CSLC Lease Premises). Impacts to marine organisms from intake and diffuser entrainment resulting from the Lease Modification Project are analyzed in Supplemental EIR Impact OWQ/MB-6, *Impact to Special Status Species Populations of Intake Flow Reduction (Compared to 2010 Project) and Use and Maintenance of Wedgewire Screens*, and Impact OWQ/MB-7*, Impact to Special Status Species Populations of Diffuser Operation*. These impacts are determined to be Less than Significant, and Less than Significant with Mitigation, respectively. Pursuant to State CEQA Guidelines section 15126.6, alternatives are considered where they can avoid or substantially lessen any significant effects of the project.

A6-6 The comment recommends revising the impact assessment within Section 4.1, *Ocean Water Quality and Marine Biological Resources*, to address the potential for the Lease Modification Project to increase the rate of ocean acidification, which is an adverse effect of global climate change on marine systems. The comment indicates that effluent discharged from the HB Desalination Plant could be expected to have a lower pH level than ambient ocean conditions. The proposed Lease Modification Project addresses the installation of the diffuser, which is designed to reduce salinity in the concentrated discharge from the HB Desalination Plant to comply with Desalination Amendment receiving water limits and to minimize the size of the Brine Mixing Zone (BMZ) (see Section 2.4.4, *Diffuser Design*). Along with minimizing the impact to salinity, diffuser design would also minimize the adverse effects of other properties of the effluent discharged including pH levels. The discussion of Impact OWQ/MB-5, *Impact to Ocean Water Quality from Wedgewire Screen and Diffuser Operation and Maintenance*, indicates that the design features would minimize the BMZ to reduce the adverse water quality effects of the effluent discharged to a less than significant level.

The proposed Lease Modification Project includes the diffuser installation, but would not change the quantities or physical and chemical properties of the effluent, which depend on operational conditions of the HB Desalination Plant. See master response MR-2*, Lease Modification Project Scope,* regarding the scope of the proposed Lease Modification Project, which does not include the onshore desalination plant components approved by the City of Huntington Beach in 2010.

A6-7 The Supplemental EIR is revised to include a description of the critical habitat designated for snowy plover in 2012 and an analysis of construction noise impacts to special-status wildlife, if present onshore, at Huntington State Beach. As the commenter notes, the Draft Supplemental EIR acknowledged the presence of western snowy plover near the Lease Modification Project area. The nearest critical habitat is 1.5 miles from the project area. The revisions to Supplemental EIR Impact OWQ/MB-2, *Impact to Special Status Species Populations of Intake Screen and Diffuser Installation (Not Including Underwater Noise)*, do not change the impact's level of significance that was defined in the Draft Supplemental EIR; it remains less than significant.

A6-8 See master response MR-6, *Marine Protected Areas*.

A6-9 Supplemental EIR Section 4.1.3, *Ocean Water Quality and Marine Biological Resources, Significance Criteria*, presents the justification for using the significance criteria presented. The one concerning special-

status species is whether the project would have a "substantial adverse effect," which is further defined in the EIR to be if the project "has the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species…." This criterion was not used in the Supplemental EIR due to the absence of regulatory guidance. The Desalination Amendment was considered by Supplemental EIR preparers and the CSLC determined that the criterion from CEQA Appendix G, as clarified by State CEQA Guidelines section 15065, was appropriate for use in this Supplemental EIR.

A6-10 The Supplemental EIR appropriately uses and incorporates by reference the 2010 FSEIR and the State Water Resources Control Board (SWRCB 2015a) *Final Staff Report Including the Final Substitute Environmental Documentation Amending the Ocean Plan Addressing Desalination Facility Intakes, Brine Discharges, and the Incorporation of Other Non-Substantive Changes* (2015 SED) in its analysis of impacts (as stated in the Executive Summary under the subheader, *Prior Analyses Incorporated by Reference*, the Introduction to Section 4.0, *Environmental Setting and Impact Analysis,* and other sections of the Supplemental EIR). The intent and scope of this Supplemental EIR is described in master response MR-2*, Lease Modification Project Scope.* See also Responses to Comments A6-5 and A6-9 regarding entrainment-related impacts.

A6-11 Construction-related impacts, including those related to proposed dredge and fill, are analyzed in Supplemental EIR Impact OWQ/MB-1, *Impact to Ocean Water Quality of Lease Modification Project Construction Activities*, and Impact OWQ/MB-2, *Impact to Special Status Species Populations of Intake Screen and Diffuser Installation (Not Including Underwater Noise)*, which are both Less than Significant. Pursuant to State CEQA Guidelines section 15126.6, alternatives are considered in order to avoid or substantially lessen any significant effects of the project. Since the Supplemental EIR finds that construction-related impacts of proposed dredge and fill activities are not potentially significant, alternatives that reduce their extent or dictate the placement of dredged material are not required. (See also master response MR-8, *Alternatives*.)

A6-12 The comment notes that additional GHG emissions would occur as a result of construction-related offshore activities. The Supplemental EIR includes an assessment of the increase in construction emissions resulting from offshore and onshore activities related to the LMP, and

these are quantified in Table 4.6-2, *Intake and Discharge, Project-Specific GHG Emissions*.

A6-13 See Response to Comment A6-3 regarding requirements for analyzing tsunami effects on proposed Lease Modification Project structures. Supplemental EIR Section 4.7, *Hazards and Hazardous Materials*, Impact HAZ-1: *Construction and Operation Impacts of Routine Hazardous Material Transport, Use, or Disposal*, addresses the potential impacts of a tsunami on marine vessels used for Lease Modification Project construction (i.e., related to marine oil spills or vessel upset). Mitigation Measure HAZ-1 is recommended to reduce potential impacts to the environment due to Project construction activities being impacted by a tsunami. The potential new information related to the greater onshore runup from tsunamis would not likely affect the offshore facilities included in the Lease Modification Project. Please see master response MR-2*, Lease Modification Project Scope,* regarding the assessment of impacts related to the onshore desalination plant.

A6-14 The commenter addresses outfall structure back-pressure in reference to Supplemental EIR Section 4.7, *Hazards and Hazardous Materials*. The structural condition of the outfall system is addressed in Supplemental EIR Section 2.4.4.1, in the description of Diffuser Operation, not in Section 4.7. The recommendation that the CSLC consider "sliplining" the existing outfall, should future studies determine that the outfall's structural integrity would be addressed at the completion of the APLC-1, *Pipeline Integrity Assessment Inspection and Report* identified in Applicant Proposed Lease Condition-1 (APLC-1). See also Response to Comment A2-8.

A6-15 See Response to Comment A6-5 and master response MR-8, *Alternatives*, regarding consideration of alternatives that extend beyond the Lease Premises, such as the proposed extension of the intake pipeline.

As noted in master response MR-5, *Diffuser Entrainment Mortality and Species Affected*, the submitted a Draft *Technical Memorandum – Review and analysis of expected entrainment effects at and near Poseidon's proposed Huntington Beach Desalination Project* to RWQCB and CSLC staffs on August 3, 2017. However, at this time, neither the data in the Draft Memo nor the conclusions about including Emerita in the analysis have been peer reviewed.

The **Rotating Brush-Cleaned, Stainless Steel Wedgewire Screens Alternative** is identified in the Supplemental EIR as the Environmentally Superior Alternative. The commenters support for the use of rotating

screens will be provided to the Commission for consideration in its decision-making process.

II.4.7 **Comment Set A7: California Fish and Game Commission**

August 17, 2017

Honorable Gavin Newsom
Lieutenant Governor and Chair
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Via email to CSLC.CommissionMeetings@slc.ca.gov

Re: Comments on Poseidon Resources' proposed seawater desalination project at Huntington Beach (Poseidon Project)

Dear Lieutenant Governor Newson:

I am writing on behalf of the California Fish and Game Commission (FGC) to offer comments for consideration on proposed desalination projects in general, and the proposed Poseidon Project in Huntington Beach specifically. FGC provided comments to the California Coastal Commission on its consideration of the proposed Poseidon Project in February 2017[1], and appreciates the opportunity to convey similar comments to you now. A7-1

With ongoing concerns about long-term water availability for California and less snow pack as the climate warms, seawater desalination is proposed as one solution to the water needs of California communities. FGC understands the need to explore new and alternative measures to meet resource demands in a sustainable manner, and recognizes that seawater desalination has the potential to be a valuable tool in California's water supply portfolio. FGC also recognizes that climate variability is an issue facing all resource management agencies, and that balancing the needs of human populations in the face of uncertain resource availability can be a difficult task.

At the same time, current seawater desalination technology also has the potential for significant detrimental impacts to California's marine ecosystems. The mission of FGC is to ensure the long-term sustainability of fish and wildlife in California. Thus, FGC would like to emphasize that seawater desalination projects must be carefully considered and analyzed by all permitting agencies, and ultimately designed in a way to avoid or minimize

[1] http://www.waterboards.ca.gov/santaana/water_issues/programs/Wastewater/Poseidon/Letter_CFG_2017_02_01.pdf

COMMENT SET A7: CALIFORNIA FISH AND GAME COMMISSION (cont.)

adverse effects to living marine resources and habitats in the marine environment to the greatest extent possible.

A7-1 cont.

Of particular relevance, in an effort to preserve marine ecosystem functions, buffer against uncertainty, and complement species-specific management, FGC adopted the nation's first coast-wide network of marine protected areas (MPAs). In place since 2012, California's globally-significant MPA network was created to help ensure that the natural diversity, marine ecosystem functions, and marine natural heritage of the state were protected while also helping to improve recreational, educational and study opportunities.[2] FGC, along with the California Department of Fish and Wildlife and numerous other agencies and non-governmental organizations, has invested significant time and resources to ensure that MPAs are managed in a manner consistent with legislative guidance, FGC and stakeholder intent, and ensuring that the system of MPAs functions as a robust network.

I understand that there are at least nine active proposals for seawater desalination plants along the California coast that would join the ten existing plants[3], some in close proximity to MPAs. FGC seeks to strengthen the shared commitment of our partner coastal management agencies to help maximize MPA network functionality by considering actions that subject the MPA network to limited human disturbance. FGC valued the opportunity to work with the California State Lands Commission (SLC) and its staff during the MPA planning process and would like to acknowledge SLC 's continued leadership in upholding standards for marine protection, specifically its role as a key member of the MPA Statewide Leadership Team convened by the California Ocean Protection Council. In particular, SLC committed in the leadership team's adopted work plan[4] to update SLC's strategic plan to reflect commitments regarding MPAs, to assess pending agency regulations for potential impacts to MPAs, and to both consider data regarding, and identify opportunities for, mitigation and impact avoidance strategies in current regulatory/policy requirements pertinent to MPAs.

FGC reiterates its support of efforts to reduce impacts to marine resources by evaluating potential project impacts to individual MPAs, the MPA network as a whole, and site-specific marine resources during permitting and decision-making processes. As such, we urge SLC to require that proposals for seawater desalination facilities avoid or minimize impacts to MPAs and all marine resources through best available siting, design, and technology.

A7-2

Minimizing impacts through thoughtful design is consistent with the State Water Resources Control Board's recently-adopted Ocean Plan Amendment, which requires desalination plants to use the best available site, design, technology and mitigation measures feasible to minimize intake and mortality of marine life *and identifies subsurface*

[2] Marine Life Protection Act, Fish and Game Code § 2853(b)
[3] http://pacinst.org/publication/key-issues-in-seawater-desalination-proposed-facilities/
[4] Marine Protected Area (MPA) Statewide Leadership Team Work Plan FY 15/16 – 17/18, Key Action Items

COMMENT SET A7: CALIFORNIA FISH AND GAME COMMISSION (cont.)

intakes as the preferred technology.[5] Additionally, the board's policy contains requirements for protecting MPAs, including a prohibition on harmful intake and discharge structures *within* MPAs and a directive to site discharge and surface intakes at sufficient distances to minimize water quality and marine life impacts to protected areas.

A7-2 cont.

Impacts to marine life from seawater desalination clearly can be avoided through current technology such as subsurface intakes, which pull ocean water through wells and/or galleries beneath the seafloor rather than through an open pipe in the water column. Subsurface technology eliminates impacts to marine life from being impinged on an intake screen or entrained in the source water from a screened open ocean intake, impacts that can result in significant injury and death of marine species. Despite this, the policy within the Ocean Plan Amendment also provides flexibility for alternative intake and disposal methods, with greater impacts to marine life, if it can be demonstrated that preferred technologies are infeasible. It is our understanding that an earlier feasibility evaluation, performed by an Independent Scientific Technical Advisory Panel jointly convened by the California Coastal Commission and Poseidon Water, found the nine sub-surface technologies it evaluated to be technically or economically infeasible; however, we also have been informed that the Santa Ana Regional Water Quality Control Board is currently seeking additional information to help determine if subsurface intakes are feasible at the proposed Huntington Beach site, or alternative sites. FGC encourages further consideration of subsurface intakes for the Poseidon project proposal consistent with the Ocean Plan Amendment. However, FGC questions the appropriateness or necessity of siting a 50 million gallon a day desalination plant off Huntington Beach given the availability of alternative sources of water to augment Orange County's water supply portfolio at a much lower economic and environmental cost.

A7-3

At a minimum, FGC urges SLC to make avoiding potential impacts to MPA effectiveness a priority and to consider additional science on best management measures for seawater intake and discharge. While new desalination projects with open ocean intakes will not be permitted within MPAs, facilities with open ocean intakes *near* MPAs can have a direct impact on marine resources; incidental take and the reduction of critical larval connectivity between MPAs occurs as marine life is pulled into a plant and removed from the ecosystem, including organisms originating from the MPAs that are necessary to support California's marine life. Impacts from open ocean intake have the potential to undermine the ability of MPAs to function as a network, weakening the science-based framework on which they were created and potentially their ability to generate expected long-term benefits.

A7-4

While in a July 2017 letter to FGC[6] Poseidon stated that 91% of larvae estimated to be entrained by the proposed project are from fish that are not associated with the kelp and rocky reef habitat inside the southern California coastal MPA reserve network, FGC would

[5] State Water Resources Control Board, Final Staff Report and Final Desalination Amendment, including the Final Substitute Environmental Documentation. Adopted on May 6, 2015. Available at: www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/rs2015_0033_sr_apx.pdf

[6] Fish and Game Commission meeting materials for June 21-22, 2017 meeting, Agenda Item No. 34,

COMMENT SET A7: CALIFORNIA FISH AND GAME COMMISSION (cont.)

like to emphasize that kelp and rocky reef habitat are only two of the many habitat types California's MPAs are designed to protect. The network is designed to provide protection to *all* marine habitat types and their associated marine life, as mandated by the Marine Life Protection Act. Further, while Poseidon concludes that there is little or no likelihood that the project's potential entrainment could negatively affect any MPA or any network of MPAs, and that marine life effects due to entrainment are anticipated to be insignificant based on the 2010 California Environmental Quality Act (CEQA) review relied upon by SLC, the 2010 CEQA review was completed before MPAs were designated as a network within the Southern California Bight. FGC requests that at a minimum the supplemental CEQA review, or preferably a new CEQA review based on current baseline and information, fully evaluate how the proposed open ocean intake as modified would adversely impact productivity and connectivity of the affected MPA system.

A7-4 cont.

With a tidelands lease for desalination facilities poised for your consideration, it is critical to uphold protections for California's MPA network, and to preserve the state's significant investment in the resilience of our ocean. Seawater desalination can be a tool in our water supply portfolio, particularly when other less economically- and environmentally-costly options are exhausted, but it must be carefully analyzed and designed in a way to avoid or minimize adverse effects to the greatest extent possible. Siting desalination facilities, intakes, and discharges away from MPAs (and other sensitive habitats and species), and requiring the use of subsurface intakes, will help ensure California's ocean ecosystems are sustained in the long-term.

A7-5

Based on the aforementioned concerns regarding the proposed Poseidon Project and any future seawater desalination projects along the California coastline, we urge you (1) to apply sound scientific information to inform decisions surrounding siting, precautionary design, and technology for intake valves and discharge sites; (2) to seriously evaluate if or how the community need justifies the impacts associated with the proposed project relative to other options or sitings; and (3) to structure an adaptive process for any approved project to include periodic project review for careful consideration of new scientific information and technologies that may reduce impacts, and how to integrate them into the existing project.

Sincerely,

Eric Sklar
President

ec: Members, California Fish and Game Commission
Honorable Betty T. Yee, California State Controller and member, California State Lands Commission
Michael Cohen, Director of the California Department of Finance and member, California State Lands Commission
Dayna Bochco, Chair, California Coastal Commission
Jennifer Lucchesi, Executive Officer, California State Lands Commission

COMMENT SET A7: CALIFORNIA FISH AND GAME COMMISSION (cont.)

Lieutenant Governor Newsom
August 17, 2017
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Jack Ainsworth, Executive Director, California Coastal Commission
Felicia Marcus, Chair, State Water Resources Control Board
David Noren, Chair, North Coast Regional Water Quality Control Board
Dr. Terry Young, Chair, San Francisco Bay Regional Water Quality Control Board
Dr. Jean Pierre Wolff, Chair, Central Coast Regional Water Quality Control Board
Irma Munoz, Chair, Los Angeles Regional Water Quality Control Board
William Ruh, Chair, Santa Ana Regional Water Quality Control Board
Henry Abarbanel, Chair, San Diego Regional Water Quality Control Board

RESPONSE TO COMMENT SET A7: FISH AND GAME COMMISSION

A7-1 See master response MR-6, *Marine Protected Areas*. Also, see master response MR-7, *Cumulative Impacts*; the cumulative scenario considered in the Supplemental EIR also identified other existing and proposed desalination facilities along the California coast (see Figure 3-2 in the Supplemental EIR).

A7-2 See master response MR-6, *Marine Protected Areas*.

A7-3 See master response MR-8, *Alternatives*.

A7-4 See master response MR-6, *Marine Protected Areas*.

A7-5 See master response MR-6, *Marine Protected Areas*.

II.4.8 Comment Set A8: California Department of Parks and Recreation, Orange Coast District

State of California • Natural Resources Agency — Edmund G. Brown, Jr., *Governor*

DEPARTMENT OF PARKS AND RECREATION — Lisa Ann L. Mangat, *Director*

Orange Coast District
3030 Avenida del Presidente
San Clemente, CA 92672
949-492-0802

Transmitted via Email to: CEQA.comments@slc.ca.gov

July 27, 2017

Alexandra Borack, Project Manager
100 Howe Avenue, Suite 100-South
California State Lands Commission
Sacramento, CA 95825

Regarding: Seawater Desalination Project at Huntington Beach: Outfall/Intake Modifications and General Lease — Industrial Use (PRC 1980.1) Amendment (Lease Modification Project)

Dear Alexandra Borack:

As neighboring land managers, State Parks is interested in and concerned about the effects of the proposal to modify the existing Huntington Beach Generating Station for seawater desalination purposes. We have reviewed the Draft Supplemental Environmental Impact Report (EIR) titled Seawater Desalination Project at Huntington Beach: Outfall/Intake Modifications and General Lease — Industrial Use (PRC 1980.1) Amendment (Lease Modification Project). We understand that this amendment to the 2010 EIR proposes two modifications including the installation of 1-millimeter wedgewire screens on the offshore end of the seawater intake line, and the installation of a multiport diffuser on the offshore end of the outfall. A8-1

State Parks believes that the CEQA document does not adequately address potential impacts to the wildlife at Huntington State Beach, notable the California least tern. Based on the memorandum included as an attachment of the Draft Supplement EIR by Dr. Pete Raimondi who was asked to review the proposed modifications to the project, there is not sufficient information provided in the document to adequately address cumulative impacts that would result from the proposed modifications to the project. Dr. Raimondi determined that the wedgewire screen will only be effective for meroplankton and fish eggs and larvae greater than 1 mm. The resulting entrainment and loss of fish larvae 1 mm or smaller in size is an estimated 74,000,000 fish larvae despite reduced intake volumes for both the co-located operation and the stand-alone operation. While this is a reduction from the original operational impact of 103,303,290 larvae, there will still be a large impact with direct and potentially significant effects on the local food chain that have not been adequately analyzed in the CEQA document for the proposed project. In addition, the meroplankton and fish larvae mortality as a result of shear stress due to lethal turbulence from the velocity of the diffuser dilution water is estimated at 23% of the total entrained volume. Based on the community composition studies done in 2003-2004, this would result in the loss of an additional 121 million fish larvae. Dr. Raimondi states that 23% mortality of the total entrainment volume is a low estimate and the impact would likely be greater. A8-2

While some impacts to Marine Protected Areas (MPAs) have been taken into consideration, the effects that a reduction of meroplankton and fish larvae would have on the complex biotic communities outside the MPAs, particularly in the area immediately offshore of the existing plant at Huntington State Beach (HSB), have not been addressed in the Draft Supplemental EIR for the proposed project. Of particular concern are potential impacts to the California Least Tern A8-3

COMMENT SET A8: STATE PARKS ORANGE COAST DISTRICT (cont.)

Natural Preserve (CALT NP) subunit at HSB and the sensitive and endangered species protected there. Natural Preserves are established per the California Public Resources Code (Section 5019.71) for land use specifically aimed to protect and preserve rare or endangered plant or animal species and their supporting ecosystems. The California State Park and Recreation Commission established the CALT NP at HSB in 1975 in order to protect and preserve the federal and state-listed California least tern (LETE). The Natural Preserve currently supports one of the most productive LETE colonies in the state.

A8-3 cont.

LETE diet consists entirely of fish, and they forage offshore eating juvenile rockfish, anchovies, top smelt, and other fish as available. There is currently research being done at several LETE colonies throughout the state including within the CALT NP, by Point Blue Conservation Science and CSU, Long Beach to study the correlation between food availability, distance traveled for foraging, and colony success. Their results indicate that there is a strong correlation between the distance that LETE must travel for fish and the survival of chicks/fledglings and productivity of the colony. Overall, California LETE are declining as a species, so any potential impact such as a reduction in local food availability may have a pronounced effect on the population at the CALT NP and the larger population as a whole.

Thank you for the opportunity to express our concerns. If you should have any questions or need additional information, please do not hesitate to call our District Environmental Scientist Lana Nguyen at 949-201-0884 or contact via email to Lana.Nguyen@parks.ca.gov.

Sincerely,

Todd Lewis
District Superintendent
Orange Coast District

Copy via email: Lana Nguyen, Orange Coast District, CA State Parks
Kevin Pearsall, Orange Coast District, CA State Parks
James Newland, Orange Coast District, CA State Parks

RESPONSE TO COMMENT SET A8: STATE PARKS ORANGE COAST DISTRICT

A8-1 The commenter's statement of its interest in and concern about the impacts of the Project will be provided to the California State Lands Commission (Commission or CSLC) for consideration in its decision-making process. The Project that will be considered by the Commission is the proposed Lease Modification Project, as defined in Section 2 of this Supplemental EIR. (See also master responses MR-1*, Scope of the Commission's Discretionary Action,* and MR-2*, Lease Modification Project Scope*.)

A8-2 In the absence of diffuser-specific modeling, the Supplemental EIR is revised to conservatively assume a worst-case scenario that larvae in 100 percent of the total entrained volume of diffuser dilution water would be killed by exposure to lethal turbulence. (See master response MR-5, *Diffuser Entrainment Mortality and Species Affected*. Even with this increase (from 23 percent to 100 percent), the number of larvae potentially entrained represents a small fraction of the larvae at risk to entrainment that occur within the HB Desalination Plant's source water. This reduction in larvae would not result in any discernable impacts to the food chain. However, Mitigation Measure OWQ/MB-7 requires compensatory mitigation of the Area of Production Foregone (APF) as a result of diffuser operation. The impact analysis for Impact OWQ/MB-7, *Impact to Special Status Species Populations of Diffuser Operation*, in Supplemental EIR Section 4.1.4.2, *Ocean Water Quality and Marine Biological Resources, Operational Impacts*, is revised to clarify that APF considers and compensates for all direct and indirect entrainment impacts to all organisms in the affected source water body because it considers both the affected species itself and its contribution to the ecological community (e.g., as a food source).

A8-3 As described in Response to Comment A8-2, using APF to calculate compensatory mitigation acreage, as required by MM OWQ/MB-7, would ensure that affected larvae and its contribution to the ecological community (e.g., as an ultimate food source for California least tern) are compensated for in the APF mitigation calculations.

II.4.9 Comment Set A9: Santa Ana Regional Water Quality Control Board and State Water Resources Control Board

Santa Ana Regional Water Quality Control Board

July 26, 2017

Ms. Alexandra Borack, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

CEQA.comments@slc.ca.gov

COMMENTS ON DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE POSEIDON RESOURCES PROPOSED HUNTINGTON BEACH DESALINATION PROJECT; SCH No. 2001051092 and EIR #794

Dear Ms. Borack:

A9-1

The Santa Ana Regional Water Quality Control Board (Santa Ana Water Board) and State Water Resources Control Board (State Water Board) (collectively Water Boards) have reviewed the draft Supplemental Environmental Impact Report (SEIR) for Poseidon Resource's (Poseidon's) Huntington Beach Desalination Project (Project), as currently proposed. The SEIR evaluates environmental impacts associated with Poseidon's proposed modifications to the existing offshore intake and discharge structures for both co-located and stand-alone operations. The proposed modifications include the installation of 1.0 mm wedgewire screens at the intake line and a multiport diffuser with three 36-inch duckbill check valves and one 54-inch (4.5-foot) port at the discharge outfall. The SEIR indicates that if one or both remaining Huntington Beach Generating Station (HBGS) power-generating units ceases once-through cooling flows prior to the diffuser construction phase, which is anticipated to take place in late 2019, the diffuser would be installed with the central port capped (permanently closed). The diffuser's 54-inch port will open only when discharge flow is more than 127 million gallons per day (MGD) and prior to stand-alone commercial operations of the Project. The port would be capped after installation if flows are reduced from greater than 127 MGD to less than or equal to 127 MGD.

The Santa Ana Water Board is the agency responsible for issuing the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of brine and other wastes from the Project to the Pacific Ocean and for making a determination regarding the Project's consistency with California Water Code section 13142.5(b) (CWC section 13142.5(b)). Poseidon submitted to the Santa Ana Water Board both a report of waste discharge and a request for a CWC section 13142.5(b) determination. Santa Ana Water Board staff, in consultation with State Water Board staff, is currently reviewing this information but has not yet determined whether the Project, as proposed, utilizes the best available site, design, technology, and mitigation measures feasible to minimize intake and mortality of all forms of marine life as required by CWC section 13142.5(b), and as further specified in the Water Quality Control Plan for the Ocean Waters of California (Ocean Plan). Water Boards staff acknowledges that the analysis required by the Ocean Plan, in determining consistency with CWC section

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

13142.5(b), is separate and distinct from the California State Lands Commission's (State Lands Commission's) analyses for the SEIR; however, a CWC section 13142.5(b) determination is subject to CEQA.[1] Accordingly, Water Boards staff offers the following comments on the draft SEIR: A9-1 cont.

Substantive Comments

1. Page ES-9, lines 15-25 and Section 5.3.1. Water Boards staff requests that the Intake Pipeline Extension Alternative not be removed from further consideration (see section 5.3.1.2). Water Boards staff and California Coastal Commission staff are reviewing information provided by Poseidon on whether extending the intake pipeline would reduce operational impacts and are conducting additional analyses. Preliminary results indicate that extending the intake location offshore may reduce the operational impacts. Therefore, the SEIR should include further analysis for this option. Also please see comment 17. A9-2

2. Page ES-9, line 33. As noted in Appendix F1, diffusers that have more ports (and thus more jets) will likely have less shearing-related mortality. For example, if the same volume (e.g., 56 MGD) were discharged through 3 or 6 ports, the discharge velocity would be lower in the 6-port scenario. Therefore, since velocity is the cause of shearing-related mortality, it follows that a diffuser with 6 ports instead of 3 would be the environmentally superior alternative. The SEIR should be revised to incorporate this conclusion. Also please see comment 19. A9-3

3. Page 2-19, lines 23-25. The SEIR states that "the cap would be sized to overcome the buoyant force and the maximum pressure inside the diffuser with a suitable factor of safety." The SEIR should be revised to specify the maximum pressure expected and define the "suitable factor of safety." A9-4

4. Page 2-21, lines 1-27. The SEIR states that reducing the flow from 514 MGD to 387 MGD results in a reduction of head loss by 0.58-0.71 feet (as shown in Appendix H1). The SEIR then states that reducing the flow to 127 MGD will result in a head loss of 4.99 feet. Additionally, the technical memorandums from Alden Laboratories dated March 22, 2017, March 31, 2017, and April 26, 2017 all assume a brine discharge flow of 127 MGD. The SEIR should include updates to these calculations to reflect the currently proposed discharge volume of 56.7 MGD for permanent stand-alone operations. A9-5

5. Page 2-22, Table 2-5. The calculation of the discharge velocity should be clarified. It appears that velocities in the table are calculated by dividing the flow (discharge volume) by the cross sectional area of the ports. However, the cross sectional area varies between approximately 8.6 ft^2 and 13 ft^2 according to Table 2-5. While the cross sectional area of duckbill diffusers does vary for different flow rates, this section should be revised to include a clarifying discussion of how port size, and thus discharge velocities, are calculated. A9-6

6. Page 2-27, line 13. If gravity anchors are to be used, then any and all estimates of construction-related mortality in the SEIR should include the acreage that the gravity anchors will occupy. A9-7

[1] NPDES permits are statutorily exempt from CEQA (CWC section 13389).

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

7. Page 2-31, Table 2-6 and Section 4.1.4.2. Table 2-6 and section 4.1.4.2 (page 4-54, lines 9-10) should be updated to include an option 4: stainless steel, self-cleaning screens. This would provide context for comparing the environmentally superior alternative, as identified in Section 5, with the proposed design. A9-8

8. Section 4.1.4. The SEIR should include an assessment of entrainment effects from the Project on nearby marine protected areas (MPAs). Several MPAs, including Bolsa Bay State Marine Conservation Area (SMCA), Bolsa Chica Basin SMCA, and Upper Newport Bay SMCA, have been designated since the Final Subsequent Environmental Impact Report (FSEIR) was certified in 2010. The SEIR should evaluate the Project's potential effects on MPAs because Bolsa Bay SMCA and Bolsa Chica Basin SMCA may have overlapping source waters with the facility and the Project potentially may have impacts on Upper Newport Bay SMCA. A9-9

9. Section 4.1.4. The 2010 FSEIR only reviewed environmental effects lasting 30 years, but the Project now has a proposed 50-year project life. The SEIR should evaluate whether there will be greater environmental impacts as a result of the longer operating life. A9-10

10. Page 4-26, lines 17-21. The SEIR states that "existing or potential sources of ocean water contamination…resulting in adverse effects on source water…is not relevant to the Lease Modification Project, and is not evaluated in this document." This section should be revised to include a discussion of possible source water effects from the Project. In particular, there is a possible effect on source water quality from the addition of a diffuser. Specifically, the diffuser will cause a different dilution and discharge plume than the "no-diffuser" scenario analyzed in the 2010 FSEIR. Discharged brine will flow toward the intake and could have some effect on source water quality. If the Project is not fully constructed and in operation until after HBGS ceases intake of seawater, the Project will discharge only dense brine that will flow offshore due to gravity (likely south due to the prevailing currents) and directly toward the intake. The intake is located only 340 feet (see section 4-10 of the 2010 FSEIR) from the diffuser which is roughly ten feet outside the Brine Mixing Zone, but well within the proposed 1000 feet Zone of Initial Dilution (ZID). Within the ZID, chemical constituents (e.g., chlorine and other chemicals used in pre- and post- treatment processes) are permitted to exceed the water quality objectives in the Ocean Plan. Therefore, the SEIR should include a discussion of the possible effects of potential brine recirculation on source water quality for the proposed Project. A9-11

11. Page 4-52, lines 10-11. The SEIR identifies that installation of wedgewire screens composed of copper-nickel alloy may cause chemical leaching into the water column, resulting in significant and unavoidable impacts. However, the SEIR does not provide any details as to whether any potential mitigation measures have been analyzed to see if there is a way to reduce this impact. Although Water Boards staff is unaware of any additional measures to mitigate copper leaching, the SEIR should be revised to include this information and a discussion of any possible mitigation measures. A9-12

12. Page 4-59. The estimates of mortality included in the SEIR do not include mortality of fish larvae and meroplankton or how that mortality may affect the marine ecosystem and food web. Water Boards staff suggests that the estimates of marine life mortality in the SEIR be updated to account for all forms of marine life. Staff acknowledges that an accounting of mortality of all forms of marine life is a requirement of the Ocean Plan, and is not necessarily required by CEQA. However, in an effort to streamline the permitting A9-13

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

process and minimize additional analyses that may be needed, the SEIR should be revised to account for mortality of all forms of marine life to expedite technical review for the Project.

A9-13 cont.

13. Page 4-60. As noted in footnotes 25 and 26, the estimates of mortality are based on data from a 2003-04 study. This data set is now 14 years old and will be 17 years old by the proposed construction completion date for the facility. The SEIR should be revised to include an analysis of the scientific validity of relying on a data set that is almost two decades old. The Santa Ana Water Board intends to seek neutral third party review of the scientific validity of relying on the 2003-04 data.

A9-14

14. Page 4-60. Water Boards staff is currently reviewing the Empirical Transport Model/Area Production Foregone analyses provided by Poseidon, and the Santa Ana Water Board will seek neutral third party review of the calculations and mitigation ratios that were applied.

A9-15

15. Page 4-60. The State Water Board's *Final Staff Report Including the Final Substitute Environmental Documentation Adopted May 6, 2015: Amendment to the Water Quality Control Plan for Ocean Waters of California Addressing Desalination Facility Intakes, Brine Discharges, and the Incorporation of Other Non-substantive Changes* (Staff Report) contains an estimate that 23 percent of the total water entrained in dilution is exposed to shearing-related mortality. The 23 percent estimate is based on a particular case of a single jet discharging dense effluent oriented at an upwards angle of 60°. The 23 percent estimate does not take into account different diffuser designs because the estimate is purely a function of the discharge volume. As indicated in Appendix F1, the shearing-related mortality caused by a 6-port diffuser discharging at a lower velocity is likely to be lower than the shearing-related mortality caused by a 2-port diffuser discharging at a higher velocity.

A9-16

It is important to note that the 23 percent estimate contained in the Staff Report is not a regulatory provision in the Ocean Plan. The following paragraph on pages 115-116 of the taff Report provides additional information on assessing shearing-related mortality:

"Discharging through multiport diffusers would require an assessment of mortality that occurs as a result of the increased salinity at the discharge and any shearing-related mortality associated with the diffusers even though the effects will likely be minimal from properly sited multiport diffusers (Foster et al. 2013; Bothwell comment letter 2014). An owner or operator could use existing shearing data (see discussion in section 8.5.1.2 above) that has been approved by the regional water board or alternately, could elect to do their own diffuser entrainment modeling under the guidance and approval of the regional water board. Empirical studies of diffuser-related mortality are technically feasible and encouraged, but may be cost prohibitive. As more studies are done, there will be more information available on how to better estimate diffuser-related mortality in order to establish a performance standard for alternative brine disposal technologies."

Therefore, this excerpt makes it clear that the applicable regional water board has discretion to determine whether to use the 23 percent mortality estimate, or some other estimate based on other existing shearing data. Water Boards staff is still evaluating shearing-related mortality from the proposed diffuser design, so the Santa Ana Water Board staff has yet to determine how shearing-related mortality should be assessed for the Project. The SEIR should include a diffuser-specific analysis of shearing-related

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

mortality in the SEIR to determine whether the 23 percent mortality estimate is appropriate. A9-16 cont.

16. Page 4-62. The Marine Life Mitigation Plan is subject to approval by the Santa Ana Water Board in consultation with State Water Board and California Coastal Commission staffs. Water Boards staff has indicated to Poseidon that revisions to this report may be required in order to meet the requirements of the Ocean Plan. The Diffuser-Operation Marine Life Mitigation Plan should also be developed in consultation with Santa Ana Water Board and California Coastal Commission staffs. A9-17

17. Page 5-6, lines 18-24 and 29-32. Water Boards staff has reviewed the conclusions in the "Technical Memorandum: Evaluation of a Long-Distance Offshore Intake for the Huntington Beach Desalination Plant" (HDR 2016). Since the Ocean Plan requires a site to minimize impacts to all forms of marine life, Water Boards staff requests that the analysis in this report be revised to include *Emerita* and intends to submit the updated report for neutral third party review. As noted in comment 2, the SEIR should include further analysis for the Intake Pipeline Extension Alternative to confirm that it would not reduce operational impacts from the Project. A9-18

18. Page 5-16, lines 24-32. The SEIR should further analyze a 6-port diffuser. As discussed in Appendix F1, the majority of discharge-related mortality is caused by shear. A diffuser design with 6 ports (all open during both co-located and stand-alone operations) will have lower jet velocities and thus should reduce the shearing-related mortality. Thus, the SEIR should further analyze a 6-port diffuser and, as mentioned in comment 5, should include a diffuser-specific analysis of shearing-related mortality. A9-19

19. Appendix F1 provides estimates of impingement and entrainment by the Project as it is currently proposed compared to the estimates made in 2010 when a different project design was proposed. Appendix F1 does not evaluate the scientific validity of using data that is 14 years old. As mentioned in comment 13, the Santa Ana Water Board intends to seek neutral third party review of the scientific validity of relying on the 2003-04 data. A9-20

    Additionally, the turbulent shearing-related mortality from a diffuser is a new impact from the proposed project modifications, and to accurately assess a diffuser's impacts on marine biological resources, Appendix F1 should include a diffuser-specific analysis of shearing-related mortality, consistent with comment 15. A9-21

20. Appendix F1. The Ocean Plan requires an owner or operator of a seawater desalination facility to minimize intake and mortality of all forms of marine life. If possible, Appendix F1 should include an assessment of meroplankton mortality from the Project as well. Also please see comment 12. A9-22

Editorial Comments

1. Page ES-3, line 19. This sentence should be revised to state, "...to install a new wedgewire screen and a multiport diffuser...." A9-23

2. Page ES-3, lines 28-30. Update this sentence to include that Poseidon will need an NPDES permit renewal/reissuance, in addition to the CWC section 13142.5(b) determination. A9-24

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

3. Page ES-4, line 3. This sentence should be revised to note that alternative and/or additional mitigation measures might also result from the Santa Ana Water Board's determination. A9-25

4. Cover page and page 2-1, figure 2.1. The figure shows that wedgewire screens will be installed at the end of the intake pipelines, about 1,840 feet offshore. This should be changed to 1,650 feet seaward of the ordinary high water mark so that the distance of the intake offshore is consistently stated throughout the SEIR. A9-26

5. Page 2-2, line 29. There is a typographical error in the reference to a section of the CWC. The text should read "section 13142.5(b)." A9-27

6. Page 2-22, table 2-5. This table indicates that the 4.5 ft port is 56 inches, but in Table 2-2 and elsewhere, it is listed as 54 inches. A9-28

7. Page 4-25, lines 2-4. This section should be revised to note that the closest Area of Special Biological Significance (ASBS) is Robert E. Badham ASBS, which is adjacent to Irvine Coast ASBS. A9-29

8. Page 4-26, lines 2-3. The phrase "required methodology for brine discharges" should be revised to state "required technology for brine dischargers." A9-30

9. Page 4-33, lines 20-21. Line 21 should be revised to state "no mitigation measures are required under CEQA." The Ocean Plan requires mitigation for construction-related impacts. A9-31

10. Page 4-53, lines 21-22, 25, and 31. The proposed intake and discharge flows should be 106.7 MGD and 56.7 MGD, respectively. A9-32

11. Page 4-54, line 2. Since the background ocean water salinity at the Lease Modification Project site is 33.5 ppt, adding 2 ppt to the background salinity would make it 35.5 ppt. A9-33

12. Page 5-6, lines 4 and 9. Line 4 and 9 should, therefore, be revised to state 1,650 feet instead of 1,840 (see Water Board staff's comment 4). A9-34

13. Page 5-15, line 21 and pages 5-16, line 16. The text should be revised to state "close four of the ports" upon transitioning from co-located to stand-alone operations. A9-35

COMMENT SET A9: SANTA ANA RWQCB & SWRCB (cont.)

Thank you for the opportunity to comment on the draft SEIR. If you have any questions or would like to discuss further, please contact me at (951) 782-4493 or Lauma Willis at (951) 782-4920.

Sincerely,

L. Lauma Willis

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RESPONSE TO COMMENT SET A9: SANTA ANA RWQCB & SWRCB

A9-1 Information on the National Pollutant Discharge Elimination System (NPDES) permit and Water Code section 13142.5, subdivision (b), consistency review responsibilities of the Santa Ana Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) with respect to the Huntington Beach Desalination Plant Project is incorporated throughout the Supplemental EIR. California State Lands Commission (Commission or CSLC) staff acknowledges the Water Boards staffs' acknowledgment that the analysis required by the Ocean Plan, in determining consistency with Water Code section 13142.5, subdivision (b, is separate and distinct from the CSLC's analyses for this Supplemental EIR.

A9-2 See Response to Comment A6-5 and master response MR-8, *Alternatives*, regarding consideration of alternatives that extend beyond the Lease Premises, such as the proposed extension of the intake pipeline.

A9-3 The commenter suggests that the Six-port Diffuser Alternative would reduce shearing mortality in comparison with the proposed three-port diffuser, and that the CSLC should consider this as the preferred alternative. The Supplemental EIR in Section 5.4.4 does acknowledge that this alternative, operated with all six ports open would likely result in entrainment mortality in comparison with the proposed three-port diffuser.

This alternative was not considered to be the Environmentally Superior Alternative in the Supplemental EIR. While under stand-alone operation the discharge is anticipated to achieve, based on modeling results, regulatory compliance within approximately 98 meters (with a shorter distance anticipated for co-located operation), this calculation falls barely within the 100 meters allowed pursuant to the Desalination Amendment. This margin was considered to be too close to the dilution limit to be considered as superior to the proposed diffuser design.

A9-4 The estimate of maximum expected pressure expected is approximately 4.99 feet of head (3.76 feet of head in offshore components and 1.23 feet of head in onshore components) per Alden Research Laboratory (Alden). This pressure corresponds to the worst-case operating scenario for the stand-alone HB Desalination Plant in which 127 MGD of effluent is being discharged through the diffuser with the central port closed. Analyses by Alden (Alden March 22, 2017 [2017b] "Summary of Head Loss Calculations for the Poseidon Huntington Beach Desalination Plant Discharge System" and March 31, 2017 "Diffuser Head for Co-located and

Stand-alone Operation of the Poseidon Huntington Beach Desalination Plant") indicate that the maximum pressure expected during HBGS operation only (i.e., 254 MGD of effluent) would be approximately 4.87 feet of head (4.27 feet of head in offshore components and 0.60 feet of head in onshore components). The stand-alone HB Desalination Plant will ultimately discharge approximately 56.7 MGD of brine once the HBGS is fully retired.

The intent of the Alden memos was to determine the maximum pressures in the discharge system to estimate worst-case scenarios for the existing infrastructure (i.e., 127 MGD with additional diffuser port closed or 254 MGD with the additional diffuser port open). Pressures in the discharge system will be reduced when 56.7 MGD of brine is being discharged. Relative to the "suitable factor of safety", as noted in the Supplemental EIR and in the Alden memo (2017b), these types of structural considerations are details that will be refined during the detailed design process, and pursuant to the requirements of Applicant Proposed Lease Condition-1 (APLC-1), *Pipeline Integrity Assessment Inspection and Report*. See also Response to Comment A2-8.

A9-5 See Response to Comment A9-4.

A9-6 Discharge velocities of Poseidon's proposed diffuser were calculated based on information provided by the valve vendor, Tideflex, which provided the total head loss across the selected valve as a graph versus flow. Thus, for a given flow per valve, the pressure head just upstream of the valve that is equal to the dynamic (velocity) head leaving the valve is known. That initial dynamic head is dissipated (lost) downstream in the surrounding ocean. It is thus possible to calculate the initial discharge velocity without needing the valve discharge area.

A9-7 Supplemental EIR Impact OWQ/MB-2*, Impact to Special Status Species Populations of Intake Screen and Diffuser Installation (Not Including Underwater Noise)*, considers benthic disturbance, including mortality, from the installation of anchors.

A9-8 In its June 2017 comments on the Draft Supplemental EIR, Poseidon submitted a new Applicant Proposed Measure (APM-8, *Composition and Maintenance of Wedgewire Screens*) with a commitment to install stationary (not rotating) wedgewire screens composed of stainless steel. Thus, stainless steel rotating brush-cleaned screens are not part of the Lease Modification Project as currently proposed by Poseidon. The **Rotating Brush-Cleaned, Stainless Steel Wedgewire Screens Alternative** is analyzed as an alternative in Supplemental EIR Section

5.4.2, and is identified in Section 6.5, Comparison of Proposed Action and Alternatives and Environmentally Superior Alternative, as the environmentally superior alternative (see also Response to Comment A6-15).

A9-9 See master response MR-6, *Marine Protected Areas*.

A9-10 The Supplemental EIR assumes a 50-year project life as noted in Section 4.6, *Greenhouse Gas Emissions*. Section 8.1 discusses projected sea-level rise out to 2100.

A9-11 Source water (i.e., ocean water) quality impacts are considered in Supplemental EIR Section 4.1, *Ocean Water Quality and Marine Biological Resources*. Treatment of source water used in the desalination process would occur onshore and is outside the scope of this Supplemental EIR.

A9-12 See Response to Comment A9-8 regarding the proposed use of stainless steel wedgewire screens. Use of copper-nickel alloy screens would require approval of the Commission and regulatory agencies, including the RWQCB, based on analyses of data gathered over time from other sources (e.g., other facilities that use solid state copper-nickel structures in an ocean environment), to support a finding that any associated leaching has no potentially significant adverse ocean water quality impact. Copper-nickel alloy wedgewire screens and their associated benefits and impacts are analyzed in Supplemental EIR Section 5.4.3, *Alternatives Evaluated In This Supplemental EIR*. The Draft Supplemental EIR noted there were no available mitigation measures to reduce solid state copper leaching, and the commenter acknowledges that it has also not identified any mitigation measures to include in the Final Supplemental EIR.

A9-13 The commenter acknowledges that accounting for mortality of all forms of marine life is a requirement of the Ocean Plan, not CEQA. See master-response MR-3*, Responsible Vs. Lead Agency & Supplemental Vs. Subsequent EIR* regarding the role of CSLC as a responsible agency and use of the Supplemental EIR by other agencies, including the Water Boards.

A9-14 See master response MR-5, *Diffuser Entrainment Mortality and Species Affected*.

A9-15 The commenter states that the Water Board staff is reviewing the ETM/APF analyses. This comment does not require a specific response. This comment does not raise a significant environmental issue.

A9-16 See master response MR-5, *Diffuser Entrainment Mortality and Species Affected*.

A9-17 Supplemental EIR MM OWQ/MB-7 has been revised to clarify that the draft Diffuser-Operation Marine Life Mitigation Plan shall be concurrently submitted to CSLC, RWQCB, CDFW, and CCC staffs for review and Plan development.

A9-18 See Response to Comment A6-5 and master response MR-8, *Alternatives*, regarding consideration of alternatives that extend beyond the Lease Premises, such as the proposed extension of the intake pipeline.

A9-19 The analysis in Supplemental EIR Section 5.4.3.2, *Six-Port Diffuser Alternative, Environmental Impact Analysis*, is adequate to inform alternatives comparison, pursuant to CEQA. Regarding the request for a diffuser-specific analysis of shearing-related mortality for the 6-port diffuser alternative, see master response MR-5, *Diffuser Entrainment Mortality and Species Affected*.

A9-20 See master response MR-5, *Diffuser Entrainment Mortality and Species Affected*.

A9-21 See master response MR-5, *Diffuser Entrainment Mortality and Species Affected*.

A9-22 See Response to Comment A9-13.

A9-23 The text in the Executive Summary is revised as suggested by the commenter to clarify that a new wedgewire screen would be installed as part of the Lease Modification Project.

A9-24 The text in the Executive Summary is revised as suggested by the commenter to clarify that Poseidon will also need a National Pollutant Discharge Elimination System permit renewal/reissuance.

A9-25 The text in the Executive Summary is revised as suggested by the commenter to state that alternative or additional mitigation measures might result from the Santa Ana Water Board's Water Code section 13142.5, subdivision (b), consistency determination.

A9-26 The distance offshore of the Ordinary High Water Mark (OHWM) is used to identify the boundaries of Lease PRC 1980.1, which extends 1,710 feet as shown in Figures ES-1 and 1-1. Stating that the wedgewire screen location is 1,650 feet from the OHWM clarifies that the screens will be installed within the boundaries of PRC 1980.1. The same applies to the

location of the proposed multiport diffuser. The general reader, however, typically uses distance from shore as a reference point. Both values are correct and can be used interchangeably.

A9-27 The typographical error in Section 2.1 (Project Summary) is corrected to clarify the reference to Water Code section 13142.5, subdivision (b).

A9-28 The value in Table 2-5, *Initial Diffuser Discharge Velocities (Various Operating Scenarios)*, is revised as suggested by the commenter to clarify the size of the diffuser pipe.

A9-29 The text in Section 4.1.1, *Environmental Setting*, is revised as suggested by the commenter to note that the closest Area of Special Biological Significance (ASBS) is Robert E. Badham ASBS.

A9-30 The text in Section 4.1.2, *Regulatory Setting*, is revised as suggested by the commenter to clarify reference to the required technology (not methodology) for brine dischargers.

A9-31 The text in Section 4.1.4, *Environmental Impact Analysis and Mitigation*, is revised as suggested by the commenter to clarify that no mitigation measures are required under CEQA.

A9-32 The values in Section 4.1.4.2, *Operation Impacts*, is revised as suggested by the commenter to clarify the proposed intake and discharge flows.

A9-33 The value in Section 4.1.4.2, *Operation Impacts*, is revised as suggested by the commenter to clarify the background ocean water salinity.

A9-34 The values in Section 5.3.1, *Intake Pipeline Extension Alternative*, is revised as suggested by the commenter to clarify the distance of the existing offshore Huntington Beach Generating Station intake pipeline. See also Response to Comment A9-26

A9-35 The text in Section 5.4.3, *Six-Port Diffuser Alternative*, is revised as suggested by the commenter to clarify the number of ports closed upon transitioning from co-located to stand alone operations.